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Attorney's Docket: 1999DE132
Serial No.: 09/722,760
Group: 1756

REMARKS

The Office Action mailed January 12, 2004, has been carefully considered together with each of the references cited therein. The amendments and remarks presented herein are believed to be fully responsive to the Office Action. The amendments made herein are fully supported by the Application as originally filed. No new matter has been added. Accordingly, reconsideration of the present Application in view of the above amendments and following remarks is respectfully requested.

Claim Status

Claims 1 and 4-22 are pending in this Application. By this Amendment, claims 4, 5, 7 and 22 have been amended. Claims 11-15 and 18-21 have been cancelled, while new claim 23 has been added. Thus, the claims under consideration are believed to include claims 1, 4-10, 16, 17, 22 and 23.

Claim Rejections Under 35 USC § 112

Claims 1, 4-10, 14-18, 20, and 21 stand rejected under 35 USC § 112, first paragraph. The Office states that claims 1, 14, 18, and 21 recite a structured silicate salt "which contains a low molecular weight organic cation". The Office is of the position that the originally filed specification does not provide an adequate written description of the claimed structured silicate salt. Independent claim 1 has been amended to recite the cation as being "a low molecular weight organic cation or a combination of a low molecular weight organic cation with NH_4^+ , H_3O^+ , an alkali metal, an alkaline earth metal, an earth metal or with a transition metal.". Basis for the amendment is found on page 6, lines 1-4. It is therefore contended that the 35 USC § 112, first paragraph rejection has been overcome.

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Claim Objection

Claim 5 stands rejected to as the Office states that a thick dark line runs length-wise down the middle of the page 4 of the amendments to the claims of the previous response. Attached as part of this Amendment is the current listing of the claims, thereby eliminating this objection.

Claim Rejections Under 35 USC § 102

Claim 18 stands rejected under 35 USC § 102(b) as being anticipated by US 5,807,629 (Elspass), as evidenced by US 5,385,776 (Maxfield). Claim 18 has been cancelled.

Claim Rejections Under 35 USC § 103

Claims 1, 4-10, 14-18, 20 and 21 (Office Action, Paragraph 11), and 19 and 22 (Office Action, Paragraph 10) stand rejected under 35 USC § 103(a) as being unpatentable over Japanese Patent 8-6295 (JP'295) combined with US 3,925,278 (Murai), US 4,992,262 (Nakagaki) and Maxfield. This rejection is respectfully overcome.

Applicant's invention, as defined by the amended claims, is directed to a method of imparting controlling or improving the charge of an electrophotographic toner or developer or electret material comprising the step of adding, as a control agent, a structured silicate salt having the chemical characteristics as recited in claim 1. Independent claim 22 is specifically recites distearyldimethyl ammonium bentonite as the charge control agent.

The Office takes the position that JP'295 discloses "a charge control agent comprising a composition that comprises the quaternary ammonium salt compound (1) of Table 1 of JP'295 and organic bentonite in a weight ratio of 50:50." The Office states the JP'295 does not identify the organic bentonite as distearyldimethyl ammonium bentonite as recited in independent claims 19 and 22.

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The Office then concludes:

It would have been obvious for a person of ordinary skill in the art, in view of the teachings of Murai, Nakagaki and Maxfield, to use the readily commercially available BENTONE 34 as the organic bentonite in the toner disclosed by JP'295, because that person would have had a reasonable expectation of successfully obtaining an electrophotographic toner having stable electrostatic charge performances under conditions of high humidity and high temperature, as well as under low humidity and low temperature, as taught by JP'295.

Applicant can not agree.

The JP '295 reference discloses a charge controlling agent composition having two main constituents. Those constituents are a charge control agent and a specific extender(Paragraph 0014). The charge control agent in the charge controlling agent composition is a quaternary ammonium salt (Paragraph 0016). This is the only charge control agent disclosed by JP '295. The extender used in JP'295, as disclosed in Paragraph 0015, includes kaolin clay, talc and bentonite. Thus, from the clear teachings of JP'295, there is no disclosure, teaching, or suggestion that a structured silicate salt can be used as a charge control agent. The secondary references cited by the Examiner in the § 103 rejections likewise does not teach, disclose, or suggest a structured silicate salt as a charge control agent.

It is Applicant's courteous position that its invention, as defined by the amended claims, is not made obvious by any combination JP'295 in combination with secondary references.

It is beyond contention that a sustainable case of obviousness under § 103 requires the prior art to provide the motivation for one with ordinary skill in the art to arrive at the invention, as claimed. Here, Applicant is claiming a method for imparting, controlling or improving the charge of certain materials which includes step of using, as a charge control agent, a structured silicate salt. Simply put, the prior art is completely devoid of any teaching, suggestion or disclosure which would motivate one with ordinary skill in the art to contemplate employing a structured

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silicate salt as a charge control agent in a method to improve charge characteristics of certain materials. This is so because JP'295 unequivocally states that the charge control agent is a quaternary ammonium salt. There exists nothing within the JP'295 reference which would guide an ordinary artisan to the conclusion that a structured silicate salt can be used as a charge control agent. Likewise, the secondary references provide no teaching in which would lead an ordinary artisan to arrive at Applicant's method.

Additionally, a § 103 rejection requires the ordinary artisan to have at least a reasonable expectation of success. This expectation of success is absent. Here, as the prior art does not in any way teach a structured silicate salt as a charge control agent, one with ordinary skill in the art could not enjoy a reasonable expectation of success that a structured silicate salt would act in a manner that improves, controls or changes the charge characteristics of a particular material.

The Office states in support of its rejection:

Even if the instant claims did recite that the structured silicate salt or distearyldimethyl ammonium bentonite is a charge control agent, as discussed in the rejections, BENTONE 34 meets the limitations of distearyldimethyl ammonium bentonite and of a structured silicate salt recited in the claims. "A chemical composition and its properties are in-separable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. In re Spada, 911, F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990)." MPEP 2112.01.

Applicant courteously submits that the Office's reliance in In re Spada is misplaced.

The claims at issue in In re Spada were directed to a "pressure sensitive adhesive composition" (underlining added). The court in In re Spada found that the discovery of a new property or use does not impart patentability on a composition claim when the composition is present in the prior art. In re Spada is distinguishable from the instant situation as Applicant is claiming a method, not a composition.

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For at least the forgoing reasons, it is respectfully urged that Applicant's invention, as defined by the amended claims, are not made obvious by any combination of JP'295 and the secondary references, and thus requests reconsideration and withdrawal of this rejection.

With regard to new claim 23, Applicant is claiming a method of imparting, controlling or improving the charge of an electrophotographic toner or developer, or an electret material by employing a structured silicate salt as a charge control agent. The charge control agent is capable of imparting either a positive or negative charge. The charge control agent composition of JP'295, as it uses a quaternary ammonium salt as the charge control agent, is only capable of producing a negative charge. See Table 2 of JP'295. Thus, the method of the present invention can be used with both positive and negative xerographic copying systems, while JP'295 is limited to positive ones.

Claims 1, 4, 7-10, 14-18 and 21 stand rejected under 35 USC § 103(a) as being unpatentable over Canadian Patent 2, 244, 367 (CA'367). This rejection is respectfully traversed.

CA'367 discloses an "interpolyelectrolyte complex" (IPEC) as a charge control agent. IPECs are composed of polyanions (= anionic macromolecules) and polycations (= cationic macromolecules).

The Office states that the "polycation-forming compounds can be a polymeric ammonium salt obtained by homopolymerizing the monomer of formula (1) disclosed at page 11, lines 10-21, n,m-ionenes of the formula disclosed at page 12, line 15 and the poly(viologen)s of the formula disclosed at page 12, line 20."

With respect to the polymeric ammonium salts, the formula on page 11, lines 10-17 of CA'367 represents the monomeric unit of the homopolymer thereof. The monomeric unit is not used as the charge control agent in the CA'267 reference. In the claimed invention, the cation is a low molecular weight organic cation or a combination thereof with certain additional chemical species, but is not polymerized.

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The polyanions such as n,m-ionenes and polyviologens are excluded from the presently claimed low molecular weight cations.

There exists no motivation within CA'367 for one with ordinary skill in the art to contemplate the use of the structured silicate salt which is claimed by the present invention. Specifically, the CA'367 reference speaks to homopolymers and to compound classes which are outside the claimed range of Applicant's method. In consequence, it is respectfully contended that any motivation for one with ordinary skill to alter the CA'367 reference to arrive at the present invention is gained by the use of impermissible hindsight based upon a knowledge of Applicant's disclosure.

Therefore, it is respectfully contended that the 35 USC § 103 rejection in view of CA'367 is in error and Applicant respectfully requests its reconsideration and withdrawal.

Double Patenting

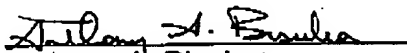
Claims 1, 4, 7-10 and 18 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 6,030,738.

U.S. 6,030,738 is the corresponding US Patent to CA'367. For all the reasons advanced with respect to the §103 rejection under CA'367, it is Applicant's respectful opinion that the amended claims are not made obvious by claims 1 through 8 of U.S. '738. In consequence, Applicant seeks reconsideration and withdrawal of the judicially created obviousness-type double patenting rejection in view of U.S. 6,030,738.

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In view of the forgoing amendments and remarks, the present application is believed to be in condition for allowance, and reconsideration of it is requested. If the Examiner disagrees, she is requested to contact the attorney for Applicants at the telephone number provided below.

Respectfully submitted,


Anthony A. Bisulca
Attorney for Applicant
Registration No. 40,913

(CUSTOMER NUMBER 25,255)

Clariant Corporation
Industrial Property Department
4000 Monroe Road
Charlotte, North Carolina 28205
Phone: (704) 331-7151
Fax: (704) 331-7707